

AMENDMENTS TO THE CLAIMS

The claims in this listing replaces all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-20. (Canceled)

21. (Currently Amended) A ~~modified excitation vector generator used in a CELP speech encoder/decoder,~~ CELP speech encoder/decoder comprising a modified excitation vector generator coupled to an algebraic codebook and a synthesis filter, said modified excitation vector generator comprising:

a vector ~~providing system~~ provider configured to provide an input excitation vector from said algebraic codebook;

a waveform ~~providing system~~ provider configured to provide a fixed waveform from a memory; and

a ~~convolution system~~ convolutor configured to convolute said fixed waveform with said input excitation vector to generate a modified excitation vector,

wherein said modified excitation vector is provided as an input to the synthesis filter.

22. (Currently Amended) The ~~excitation vector generator~~ CELP speech encoder/decoder of claim 21, wherein said ~~convolution system~~ convolutor spreads an energy distribution of said input excitation vector based upon said fixed waveform over a subframe.

23. (Currently Amended) The ~~excitation vector generator~~ CELP speech encoder/decoder of claim 22, wherein said ~~convolution system~~ convolutor performs a linear convolution.

24. (Currently Amended) The ~~excitation vector generator~~ CELP speech encoder/decoder of claim 21, wherein said input excitation vector comprises a vector having a plurality of non-zero samples.

25. (Currently Amended) The ~~excitation vector generator~~ CELP speech encoder/decoder of claim 22, wherein said waveform ~~providing system~~ provider provides a plurality of fixed waveforms.

26. (Currently Amended) The ~~excitation vector generator~~ CELP speech encoder/decoder of claim 25, wherein said ~~convolution system~~ convolutor uses one of said plurality of fixed waveforms for each subframe.

27. (Currently Amended) The ~~excitation vector generator~~ CELP speech encoder/decoder of claim 21, wherein said ~~convolution system~~ convolutor modifies an energy distribution of said input vector.

28. (Previously Presented) A ~~method of providing an input excitation vector used in a CELP speech encoder/decoder, coupled to~~ employing a method of providing an input excitation vector used in the CELP speech encoder/decoder having an algebraic codebook and a synthesis filter, said method of providing an input excitation vector comprising:

providing an input excitation vector from said algebraic codebook;

providing a fixed waveform from a memory; and

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convoluting said fixed waveform with said input excitation vector to generate a modified excitation vector,

wherein said modified excitation vector is provided as an input to the synthesis filter.

29. (Previously Presented) The method of claim 28, wherein said input vector comprises a vector having a plurality of non-zero samples.

30. (Previously Presented) The method of claim 28, wherein convoluting comprises modifying an energy distribution of the input excitation vector.